



# UNITED STATES PATENT AND TRADEMARK OFFICE

11-11

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/611,393

06/30/2003

Kevin Lo

200311912-1

1507

22879 7590 07/31/2007

HEWLETT PACKARD COMPANY  
P O BOX 272400, 3404 E. HARMONY ROAD  
INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER

HSIEH, SHIH WEN

ART UNIT

PAPER NUMBER

2861

MAIL DATE

DELIVERY MODE

07/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/611,393	<b>Applicant(s)</b> LO ET AL.	
	<b>Examiner</b> shih-wen hsieh	<b>Art Unit</b> 2861	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-41,43 and 44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-28,32-35 and 37-40 is/are allowed.
- 6) ☒ Claim(s) 1,3,29-31,36,41,43 and 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

***Terminal Disclaimer***

1. The terminal disclaimer filed on May 14, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6,860,583 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 43 and 44 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to:

Claim 43:

The recitation of: "means for sealingly supporting said ink transport means, said ink containment means, and said contact surface area increasing means" in which the "said contact surface area increasing means" did not specify in claim 41 to which this claim directly depends on to therefore form a lack of antecedent basis problem.

Art Unit: 2861

Claim 44:

The recitation of: "wherein said platen is further configured to channel ink from flank portions of said first member to said second member" is unclear. Because this newly added claim is set to be directly depended on claim 1, and the subject matter of "said platen" in this newly added claim is not recited in claim 1, and therefore forming a lack of an antecedent basis problem, and causing a unclearness to this newly added claim.

No art rejection to these two claims in this office action.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 29-31, 36 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lebold et al.

In regard to:

Claim 1:

Lebold et al. teach:

An ink over-spray containment apparatus (20, figs. 1-4, Lebold et al. called it an ink jet absorber device), comprising:

a first member (22) having a first fluidic transport coefficient and a first ink affinity;  
and

a second member (24) coupled to said first member, said second member having a second fluidic transport coefficient lesser than said first fluidic transport coefficient and a second ink affinity greater than said first ink affinity, refer to col. 4, lines 4-7; col. 5, lines 28-35; col. 5, line 64 to col. 6, line 26.

Please note: the dispersion of the waste ink droplets 34 from the top layer to the bottom layer is due to the difference of capillary forces/capillary gradient. Although parameters used to move fluid from one member to another member next to it have different names, such as fluidic transport coefficient, ink affinity used in the instant application, capillary head used in 6,860,583 reference, and capillary force/gradient (see col. 2, line 36 and col. 6, line 18 of reference 6,809,047) used in reference

Art Unit: 2861

6,809,047, however, all of those parameters are established to achieve a condition that is to move the fluid received in the first member to the second member next to it. Or, they are equivalent or compatible to each other.

The device of Lebold et al. DIFFERS from claim 1 in that it does not teach: wherein said first member comprises porous plastic.

To that issue, Lebold et al. teach in their col. 5, lines 35-41 that: "As discussed above, each of the two layers 22 and 24 is preferably a non-woven needlefelt. The composite non-woven ink absorber 20 is also preferably a needlefelt. However, each of the two layers could be a material which is not a needlefelt and does not have to be non-woven. The composite can also be formed by other than needlefelting".

From the quoted column and lines above, Lebold et al. teach: The composite can also be formed by other than needlefelting. To that issue, Lebold et al. did not specifically teach what are those materials other than needlefelting.

However, it would have been an obvious matter to a skilled one in the art that anything that can absorb ink can be used as the materials for other than needlefelting. Based on this, a porous plastic as amended in this claim is a well known material, which can be used in Lebold et al.'s invention in lieu of the needlefelting and the end result of Lebold et al.'s invention will still be equally served, however, the cost of the porous plastic may be higher than that of the needlefelting.

Claim 3:

Lebold et al. further teach:

The apparatus of claim 2, wherein said second member comprises needle felt ,  
refer to col. 5, lines 37-41.

Claim 29:

A method of containing fluid over-spray, comprising:

providing a first member having a first ink affinity, a first fluidic transport  
coefficient and a sprayed surface,  
providing a second member having an ink affinity greater than said first ink  
affinity and a fluidic transport coefficient lesser than said first fluidic transport;  
transporting an ink from said sprayed surface to said second member; and  
disposing said first and second members, within a platen to contain a seepage of  
said ink from said first and second members.

Rejection:

The first two providing steps and the transporting step are deemed to be made  
obvious by the functions of the structure in the combination discussed above for claim 1.

As to the disposing step, Lebold et al. did not teach any container, such as  
“platen” recited in this claim, in their fig. 3, i.e., Lebold et al.’s fig. 3 simply shows an ink  
jet printer (30) discharges ink onto the ink jet absorber (20).

Lebold et al.’s invention is directed to a two-part ink absorber, the ink discharged  
by the ink jet printer (30) absorbed by the top layer (22) is dispersed as shown in Lebold  
et al.’s fig. 3 vertically through the top layer (22), and will horizontally disperse the waste  
ink droplet (34) throughout the bottom layer (24) (see col. 5, line 64 to col. 6, line 8).

Although Lebold et al. did not specifically taught a container to support their two-part

Art Unit: 2861

absorber, however, such a container no matter what it is a platen or a waste ink container, is obviously in an ink jet printer such as the one shown in Lebold et al.'s fig.

3. Because if there is no such container in the ink jet printer to support the waste ink absorber no matter what it is a two-part absorber or any other kind of absorber, the absorbed waste ink will contaminant the internal of the printer because of it directly contact with the internal of the printer.

Based on the above discussion, Lebold et al.'s invention obviously has a container such as platen to support their two-part absorber. A platen is simply a support to support another subject matter. In ink jet printer, a platen is used to support a printing medium. However, claim 29 did not specify an ink jet printer, therefore, such a platen can be any kind of container, so long as it is able to support the two-part absorber. The platen can contain the seepage of the ink is obviously due to the natures of these two-part absorber as discussed above.

Claim 30:

The method of claim 29, further comprising containing said ink within said second member.

Rejection:

This claim is rejected on the basis as set forth for claim 29 discussed above, i.e., absorbed waste ink is dispersed vertically first through the top layer (22), then horizontally dispersed throughout in the bottom layer (24).

Claim 31:

The method of claim 30, further comprising preventing said ink from migrating back to said first member.

Rejection:

This claim is rejected on the basis as set forth for claim 29 discussed above, i.e., due to the low density/coarse denier fiber and high density/fine denier fiber construction of this two-part absorber.

Claim 36:

A method of forming an ink over-spray containment apparatus, comprising:  
providing a first member having a first ink affinity and a first fluidic transport coefficient;

providing a second member having a second ink affinity higher than said first ink affinity and a fluidic transport coefficient lower than said first fluidic transport coefficient;  
and

providing a platen that contains said first and second members and contains any ink that may escape from either the first or second members.

Rejection:

This claim is rejected on the basis as set forth for claim 29 discussed above.

Claim 41:

An ink over-spray containment system, comprising:

ink transport means for transporting ink away from a sprayed surface having an ink affinity and a fluidic transport coefficient;

ink containment means for containing said ink, said ink containment means having greater ink affinity and lesser fluidic transport characteristics than said ink transport means; and

compression means for applying a force to said ink transport means and said ink containment means to increase a contact surface area between said ink transport means and said ink containment means.

Rejection:

Ink transport means and ink containment means corresponds to the Lebold et al.'s top and bottom layer respectively, and is rejected on the basis as set forth for claim 1 discussed above.

As to the compression means, since this two-part absorber is deemed to be obviously disposed inside a container as discussed above for claim 29, and due to the flexibility of the absorber and the confined nature of the container, a compression means is naturally formed once the absorber is disposed in the internal of the container. Beside, once it begins to absorb waste ink, the weight of the absorber will increase the contact area between these two layers due to gravity forming another type of compression means.

***Allowable Subject Matter***

6. Claims 4-28, 32-35 and 37-40 are allowed.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Response to Arguments***

8. Applicant's arguments filed on May 14, 2007 have been fully considered but they are not persuasive.

1. Regarding to the material of porous plastic, as Examiner discussed above in the rejection to amended claim 1, a porous plastic material could be used in Lebold et al.'s invention. Since liquid (or specifically ink) absorption materials used in ink jet

printer are mostly non-woven felt, needlefelt, and porous plastic. Although Lebold et al. did not specifically teach porous plastic in their invention, they only said: "The composite can also be formed by other than needlefelting (see col. 5, lines 40-41)", and as Examiner discussed above, the materials used for absorbing waste ink are generally within non-woven felt, needlefelt, and porous plastic, therefore, an extended meaning to the "The composite can also be formed by other than needlefelting" is porous plastic is one of their choice. And also as Examiner discussed above, the cost of using porous plastic in lieu of needlefelt may be higher than using needlefelt.

The conclusion to this paragraph is: the amended claim 1 can not put claim 1 in allowance condition due to the discussion above.

2. A number of inventions deal with how to keep the internal of an ink jet printer from being contaminated by ink mist, ink scattered during a wiping operation, etc. Therefore, a material, such as a sponge used to absorb waste ink, will have to be contained in a container so as not contaminate the internal of the ink jet printer. The consequences of not disposing the absorber into a container is easily figured out by a skilled one in the art. Therefore, a container for holding Lebold et al.'s absorber is obvious. Beside, a platen is just a piece of device, which is used to support another piece of subject matter. Since no ink jet printer is mention in, e.g., amended claim 29, therefore, the platen can be explained as just a container, and as discussed above, Lebold et al.'s absorber is obviously disposed inside a container. A similar case existed in our daily life is: a household cleaning sponge containing detergent will be put back to

Art Unit: 2861

a container after use. Therefore, with or without amending, e.g., claim 29, claim 29 is still remained rejected.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to shih-wen hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 9/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SWH

*SWH*  
July 23, 2007

SHIH-WEN HSIEH  
PRIMARY EXAMINER

*S. Hsieh*